

EXPLOSIVES SAFETY

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DIRECTOR'S NOTES

In this day of changing environments, we need to emphasize explosives safety in all of our operations. There are two periods when personnel divert their attention from routine explosives safety practices: one is during periods of increased activity, and the second is during periods of uncertainty.

With all of today's headlines concerning RIFs, cutbacks, etc., personnel begin concentrating on job security and their attention is diverted to problems such as actions that may affect their personal life in the future. It is extremely important during times of change to increase our attention on performing ammunition operations according to approved procedures. Military commanders and civilian supervisors should add increased emphasis on explosives safety and should become personally involved in assuring explosives operations are conducted in a safe manner. It is important that we push the explosives safety message to its lowest level, since it is the soldier in the field and the civilian ammunition operator that are "at risk." Similarly, it is these same individuals that are normally impacted during cutbacks and personnel reductions.

I ask each military commander and civilian supervisor to increase their efforts to assure explosives safety issues are brought up at each meeting and that explosives safety in the workplace becomes an organizational goal.

by: John L. Byrd, Jr.
Director
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BACKGROUND ON USATCES

The United States Army Technical Center for Explosives Safety (USATCES) is the formal center of explosives safety expertise where specific technical information and support is obtained. It serves as the focal point for explosives safety matters and provides direct support to HQDA, the major Army command commanders, and the ammunition community Army-wide.

The Technical Center is dedicated to reducing ammunition/explosives accidents in every phase of the explosives' life cycle from production to use or, if necessary, demilitarization and disposal.

Our goal is to provide the best possible assistance and guidance to enable Army organizations to control the inherent risks of ammunition and explosives, avoiding the loss of mission readiness through personnel injuries and property damage.

DDESB SAFETY SURVEYS

USATCES reviewed the Department of Defense Explosives Safety Board (DDESB) safety surveys performed on Army installations in the past two years. The following list states the most commonly cited deficiencies:

- **LIGHTNING PROTECTION** - Includes lack of adequate records of inspections and tests, lack of followup on systems that fail tests, and conduct of visual inspection.
- **ELECTRICAL LINES INTO/OVER/NEAR EXPLOSIVES BUILDINGS** - Strict adherence to AR 385-64, chapter 6, is required.
- **QUANTITY DISTANCE (QD) VIOLATIONS** - MILVANS or semi-trailers used as magazines or service magazines are not sited in regard to QD.
- **SECURITY VIOLATIONS** - Failure to secure ammunition within ammunition areas and failure to provide security to range impact area.
- **IMPROPER AMMUNITION STORAGE** - Includes unserviceable stocks stacked with serviceable, ammunition not packaged properly, and inadequate storage structures.

There is increasing emphasis on installation maps showing areas of chemical/explosives contamination/burial grounds and having analysis available to show blast overpressure/thermal/fragment protection afforded (AR 385-64, chapter 4) personnel exposed to remote operations.

by: Greg Heles
Logistics Management Specialist
DSN 585-8877

HQDA WORLDWIDE AMMUNITION PORT SURVEY

The U.S. Army is in the process of reviewing port capabilities and problems worldwide in handling DOD explosives-laden ships.

The study was directed by the Director of the Army Staff (DAS) in March 1989. The USATCES, in coordination with HQDA Safety Office, Deputy Chief of Staff for Logistics (DCSLOG), Military Traffic Management Command (MTMC), and the major Army commands (MACOMs), is gathering information. Onsite surveys have been conducted in Europe, Central America, Japan, Guam, Okinawa, and Korea. The approved survey plan programs completion in April 1991.

by: John Willut
Quality Assurance Specialist/Ammunition
DSN 585-8804

QD FORMULAS SOFTWARE

The USATCES has developed computer software that solves the most commonly used quantity distance (QD) formulas.

The software, as written, will solve the QD formulas from the QD tables in DOD 6055.9-STD, Ammunition and Explosives Safety Standards.

It can be used with any of the Ammunition and Explosives Safety Standards. The formulas can be solved for weight or distance in either standard or metric measurements. The software is menu-driven and prompts you for all required information. The solution is displayed on the video display terminal. To use the software, you need an IBM PC, or compatible (Wyse PC's or Zenith 248's are examples) using MS-DOS Version 3.0 or higher.

To get a copy of the software, send a Double-Sided, Double-Density disk to:

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ATTN: SMCAC-ESL
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by: Konstantine C. Eyskens
Quality Assurance Specialist/Ammunition
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INFORMATION DATA BASE

The Explosives Safety Information Data Base (ESIDB) is an automated data base online 24 hours a day from which the ammunition community can easily retrieve information regarding energetic materials (explosives) safety.

The ESIDB is mandated by the Army Explosives Safety Management Program, 4 Feb 1988, and is an integral part of

the Explosives Safety Information Management System (ESIMS).

The data base resides on a Prime minicomputer at HQ, AMCCOM. The system has been written in INFO, a data base management system. The INFO system is maintained by ISC personnel at HQ, AMCCOM.

The data base files are maintained by personnel at the Technical Center for Explosives Safety, Savanna, IL.

by: Donald G. Van Name
Tech Data Base Coordinator
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ONLINE

Add the Explosives Safety Technical Library to your list of Department of the Army (DA) Safety resources.

We were established by the DA Explosives Safety Management Program in February 1988. The Library is envisioned as a comprehensive state-of-the-art technical library for the Army community. We officially opened for service in April 1989.

The Library operates in a newly renovated 1600 sq. ft. facility at the U.S. Army Technical Center for Explosives Safety (USATCES) in Savanna, Illinois. From here plans proceed for complete automation. The Library's major directions are:

- Being a center for implementation of new technology to store, organize, and transmit safety information.
- Accessing safety information, regardless of format, for DA personnel and organizations.
- Providing focal library service through a local area network (LAN).

To help us move toward our goals, an Information Management Plan (IMP) for an integrated library system was approved. Current fiscal constraints, however, challenge automation plans for fiscal year 1990 (FY90).

Completing initial automation efforts, an optical scanner with computer interfacing capability is on order. Other electronic resources, including a facsimile terminal (FAX) and CD-ROM drive have received Capability Request (CAPR) approval.

A near term goal is to provide 24-hour dial-up access for off-site users to electronically search the Library's catalog holdings. Eventually this will include the Army community worldwide.

The staff includes a Librarian, a Library Technician, and a temporary Clerk-Typist. They offer online searching of the Defense RDT&E Online Systems (DROLS) to DA personnel who do not have access to DROLS at their locations. Bibliographies of search results can be mailed to requestors.

by: Jacqueline S. Bey
Librarian
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THE OFFICE OF THE SCIENTIFIC ADVISOR

The safety of explosives stored in the Republic of Korea (ROK) has been a serious problem for both U.S. Forces in Korea and the Combined Forces Command (CFC) for some time.

In 1988, the Korean Ministry of National Defense reported that over 2,000 explosives storage safety violations existed at ROK ammunition installations where the large war reserve stocks for both ROK and U.S. Forces are currently stored.

Responding to the ROK request, the Joint Military Assistance Group US/ROK resolved to provide technical assistance in jointly developing solutions to the storage problems in Korea. The primary objectives of this R&D effort are to provide the greatest explosives safety with the most efficient use of scarce land, improved security, and survivability while increasing the combat readiness.

At the Seoul meeting in January, attended by Dr. Kwak, representing the Director of the U.S. Army Technical Center for Explosives Safety, the Joint Working Group selected the Underground Storage Technology as the candidate joint R&D project from a group of six R&D projects submitted by the Army, Navy, and Air Force. A draft of a Memorandum of Understanding (MOU) and a milestone schedule were adopted for approval by the respective governments.

Further information about this timely R&D project will be discussed as it becomes available.

by: Solim S.W. Kwak, PhD
Physical Scientist
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EXPLOSIVES SAFETY QUESTION

Q. Heavy rains often erode the earth cover on earth-covered magazines. How are earth-covered magazines with insufficient earth cover treated for QD purposes?

A. Magazines with 12-24 inches of earth cover should be treated as barricaded aboveground magazines. Magazines with less than 12 inches of earth cover should be treated as unbarricaded aboveground magazines.

by: Cliff Doyle
Safety and Occupational Health Manager
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REMINDER: PYROTECHNICS CAN BE DANGEROUS!

Pyrotechnics contain hazardous materials that, if improperly used, can cause injuries.

Some SAFETY RULES to follow when dealing with pyrotechnics are:

- BEFORE handling, read the instructions on the item and read the Technical Manual (TM) for specific information.
- Don't handle a pyrotechnic item if it's damaged.
- Handle all pyrotechnics carefully, and, if the situation requires, wear protective equipment and clothing.
- AIM AWAY from face, body, and friendly troops.
- Check WIND DIRECTION to avoid fire, smoke inhalation or irritation with all pyrotechnic items.
- WAIT 30 minutes after each training period before collecting DUDS, then dispose of DUDS as prescribed for the item.
- NEVER . . . repeat NEVER pry open a pyrotechnic item and ignite the powder.
- Keep pyrotechnics items away from FIRE
- If you find a STRAY PYROTECHNIC item - DO NOT HANDLE - notify the local police or the military police
- If you get HURT, seek medical help IMMEDIATELY.
- If you have any QUESTIONS, ASK!

by: Kenneth R. Parham
Safety Engineer
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ANNOUNCEMENT

The next Department of Defense Explosives Safety Board (DDESB) Seminar will be held in St. Louis, Mo. from 28-30 August.

Invitations are being mailed in the first week of June. If you don't receive an invitation or would like to receive one, call DSN 221-8624 or Commercial (202) 325-8624.

USATCES HOTLINE

A 24-hour HOTLINE has been established to better serve the needs of the explosives/ammunition community.

Callers are invited to submit any problems, comments, and suggestions to USATCES, DSN 585-6030.

The EXPLOSIVES SAFETY BULLETIN targets the ammunition/explosives community. It is printed in Savanna, Illinois.

If you wish to submit an article that is of interest to the ammunitions/explosives community, or if you have a request for more copies of the bulletin, please forward it to: Director, U.S. Army Technical Center for Explosives Safety, ATTN: SMCAC-ES, Savanna, IL 61074-9639

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**PROGRAM MANAGEMENT
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DSN 585-8745
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**EXPLOSIVES SAFETY
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DSN 585-8771
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